



June 18, 2009

ECE-BSEC

◆ Advantages and limitations of various approaches to **border** crossing *performance* measurement

◆ Infrastructure v/ procedures: Which is the most important for an efficient **border** crossing point?

◆ So...

- What about **border performance**?
- What works
- How do we know it works?



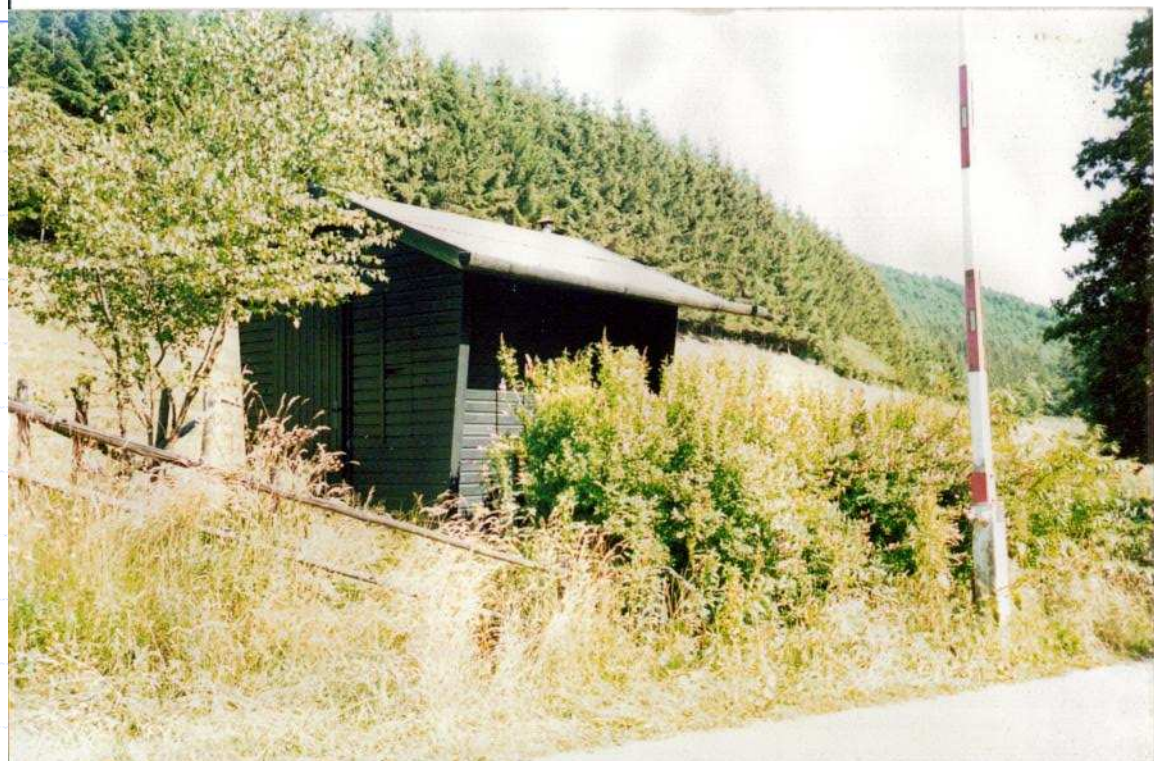
The borders aspect

1. THE NEW BORDERS



**And so
predictable...**

It used to be so simple...





Customs and land border operations

What works and what does not

What is a border?

- ◆ Historical notion
- ◆ Geographical boundaries
- ◆ Territorial extension (territorial waters, air space)

And there are fewer in the West

- ◆ Regional integration in the West
- ◆ But seizures of drugs have gone up

The traditional concept is no longer quite valid

- ◆ With modern procedures, clearance has taken place inland for the past 40 years
- ◆ Airports are borders, but they are inland
- ◆ There are international waterways
- ◆ Free zones are practically outside national boundaries
- ◆ Even bonded warehouse and transit sheds have borders
- ◆ Goods are cleared on the premises of importers
- ◆ Etc...

Where has the border gone?

- ◆ Practically, it is now where the status of the goods and passengers is verified
- ◆ It is the point where national legislation starts applying
- ◆ The case of transit: Where is the border?

Less borders

But...

This has generated fraud in the EU:

- ◆ Germany and the UK have lost 17 billion euros each in VAT per year due to unreported movements of goods
- ◆ Elimination of border controls has increased criminality

New threats and challenges

- ◆ Health
- ◆ Refugees
- ◆ Terrorism –
- ◆ Trafficking
 - Two key agencies, Immigration and Customs Enforcement (ICE) and the Bureau of Alcohol, Tobacco and Firearms (ATF), have only recently increased their co-ordination with each other and with their Mexican counterparts, the GAO found.

There are many new borders

- ◆ Transition has resulted in over 50,000 extra kilometers of border
- ◆ Borders often cut across a single territory
- ◆ Enclaves have appeared





The new borders

WHAT WENT WRONG?

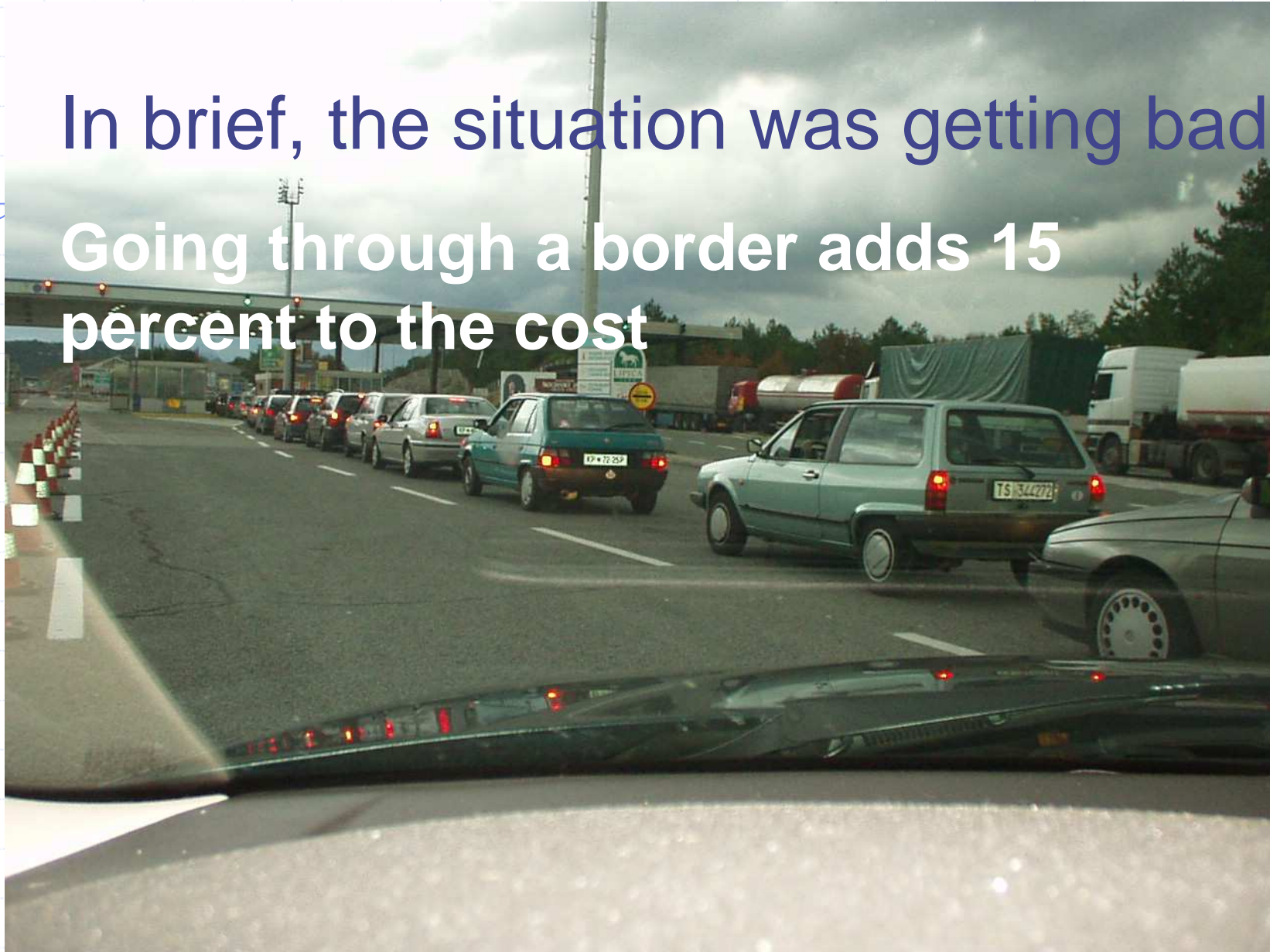


The borders aspect

2. THE ROLE OF INFRASTRUCTURE IN BORDER MANAGEMENT

In brief, the situation was getting bad

Going through a border adds 15 percent to the cost



What went wrong?



The adverse factors for a long time

- ◆ Lack of a single coordinated administration at the border
- ◆ Errors in design and delusions of grandeur
- ◆ Vested interests
- ◆ Procrastination
- ◆ Wrong approach to the management of dutiable goods
- ◆ The cargo cult

Nearly everybody has tried nearly everything – with varying success

- ◆ Refurbish
- ◆ Increase the size and number of lanes
- ◆ Computerize
- ◆ Integrated border management
- ◆ Joint border stations
- ◆ Inland clearance
- ◆ Streamlined procedures

Border issues

- ◆ Less borders: More difficulties due to insufficient checks in an overwhelmingly facilitated environment
- ◆ More borders: More difficulties due to excessive checks on un-tested, relatively low compliant, new entrants
- ◆ Huge increase in trade

Who runs the border?

- ◆ Customs (not always)
- ◆ The border police (the legacy of the Eastern block)
- ◆ Sometimes, the private sector...
 - which is usually not a good scenario, as the profit logic encourages client-capture
- Volumes of traffic have hugely increased
- New patterns of trade have emerged which Customs have difficulty in dealing with
- Delays often go up, corruption is an issue

And who runs across the border?





The new borders

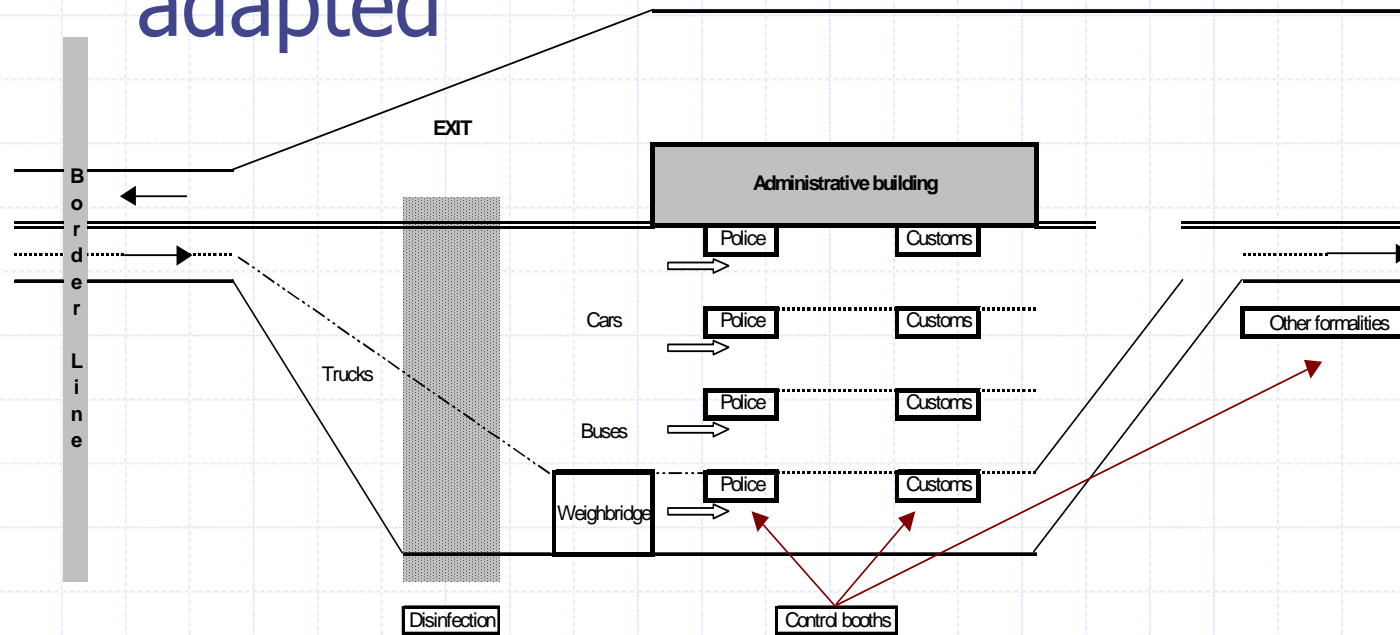
A. EXPAND CAPACITY

Infrastructure

- ◆ Easy to implement
- ◆ High visibility
- ◆ See as a panacea

Infrastructure – Design issues

Some border designs are no longer adapted



This is what a border should not look like





The new borders

B. PROMOTE NEW PROCEDURES

New procedures

- ◆ Often carbon copy of Western approaches, not necessarily adapted
- ◆ Overlooked institutional blockages
 - Inter-agency antagonism
 - Inadequate legislation
- ◆ Neglected corruption opportunities

The Green Channel Paradox



But some schemes worked: Single windows

- ◆ The Moldova “frontiera” and the Bulgarian Lesovo schemes were first attempts
 - Only a payment system
- ◆ Single windows should not be just co-located facilities or they become an additional window



The new borders

C. FACILITATE CONTROL

The control approach

◆ Trans-shipment

- Why it does not work well (Afghanistan, Israel)

◆ Over-reliance on construction

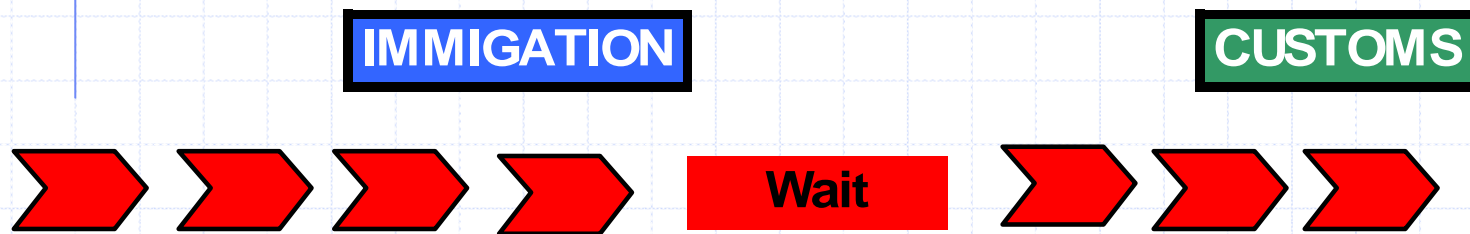
- Pharaonic designs
- Cost of maintenance such that poorly run
- No correlation between size, traffic, and staffing



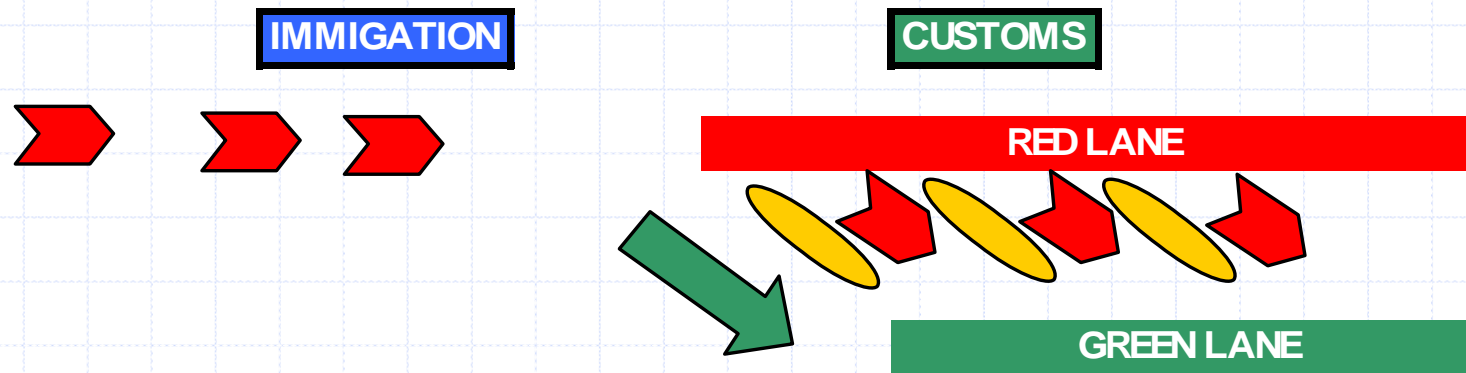
The new borders

D. SOME DESIGN OPTIONS

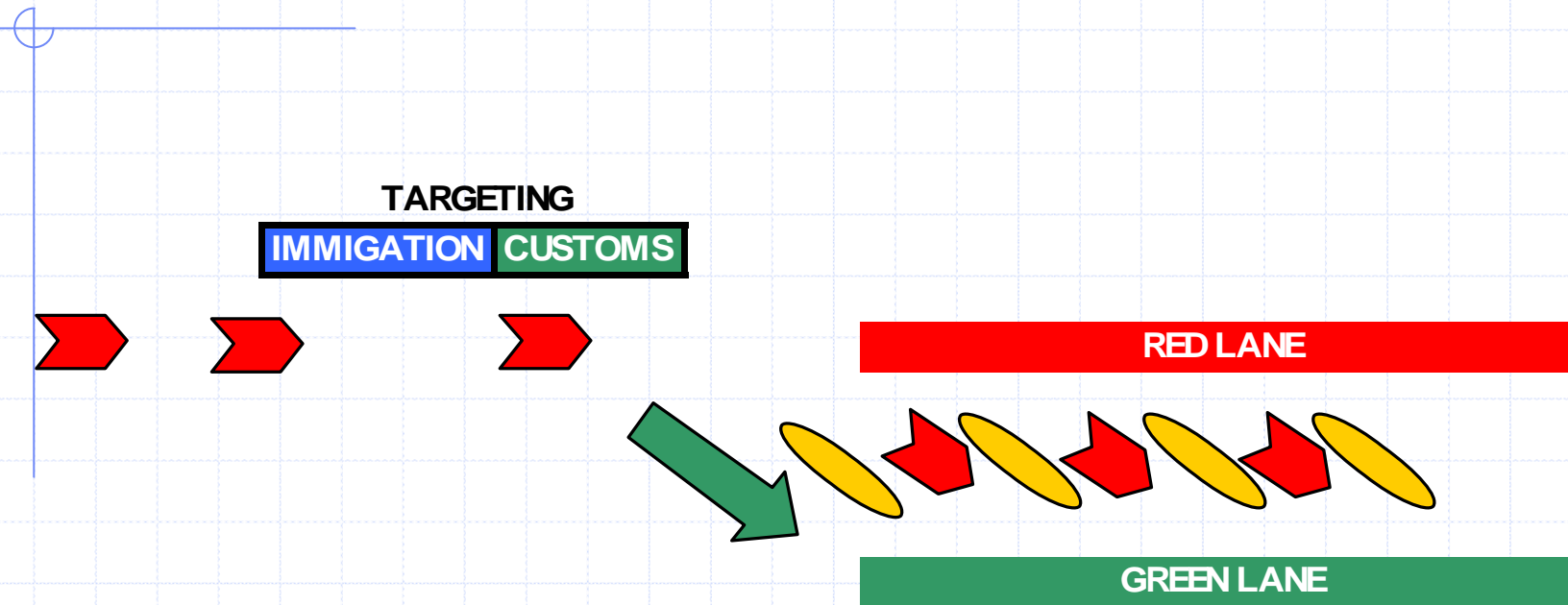
The linear design



The spur design is better



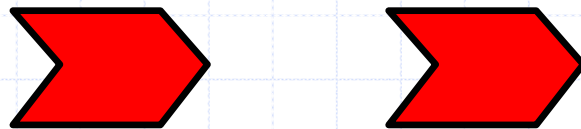
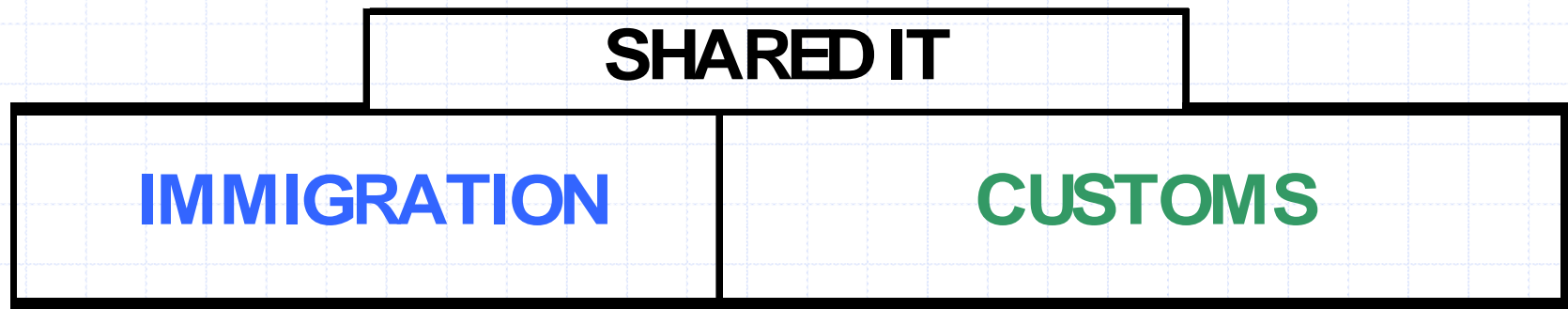
Better still: Integrate the booths



Even better

- ◆ Create dedicated lanes (transit)
- ◆ Establish a by-pass for local commuters with occasional checks at the exit

Common booth



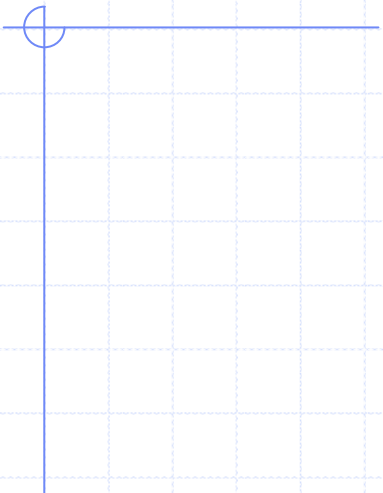
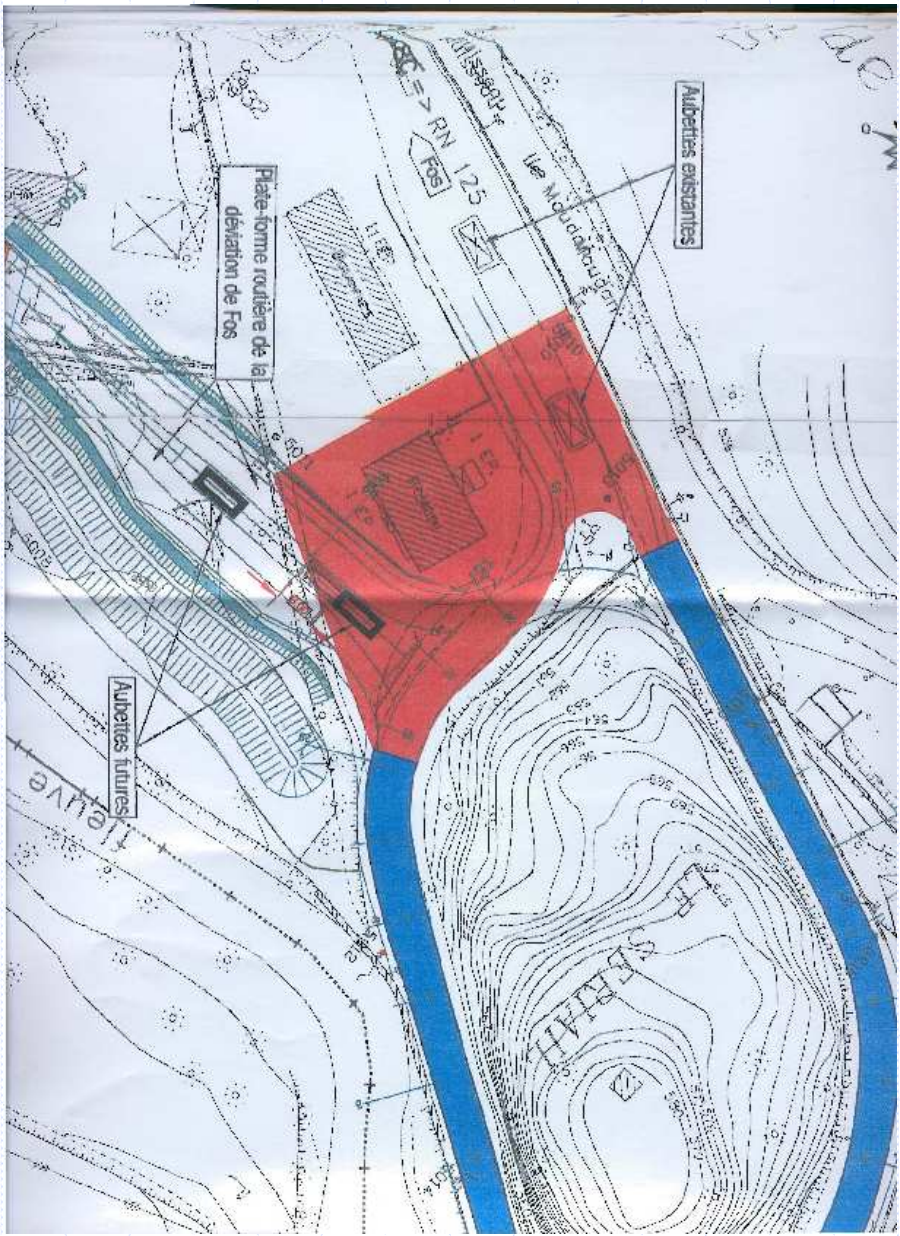
SHARED TARGETING

Green channel

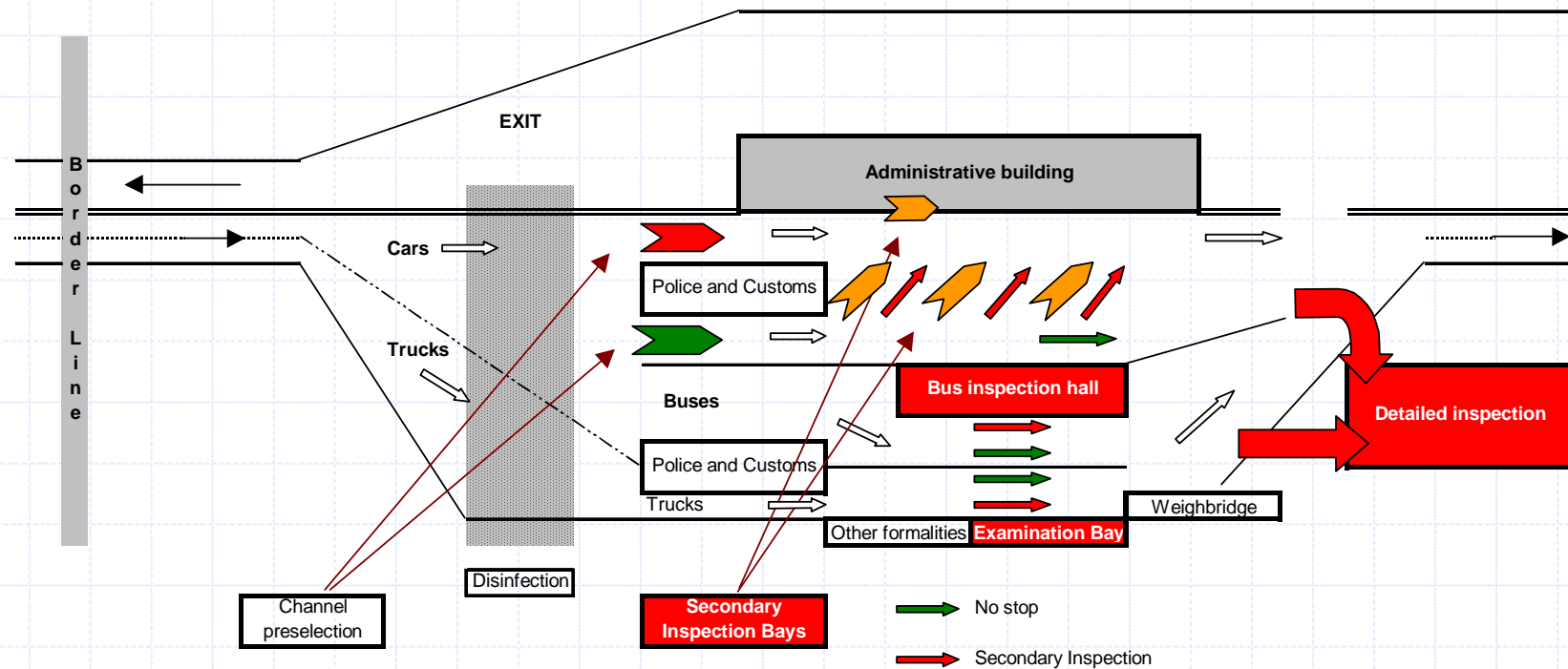
- ◆ Only works if Customs and the police cooperate
- ◆ Only works if everybody is not checked in the green channel

Shared facilities

- ◆ Were considered the panacea
- ◆ Work well given certain conditions



Some infrastructure solutions



Infrastructure - Shared facilities

- ◆ Excellent in theory
- ◆ How did they appear?
- ◆ There are different models
 - US/Canada
 - Geneva
 - Channel Tunnel
- ◆ What is shared?
 - IT
 - Space
 - Procedures
 - Control

Shared facilities - Status

◆ Enclave

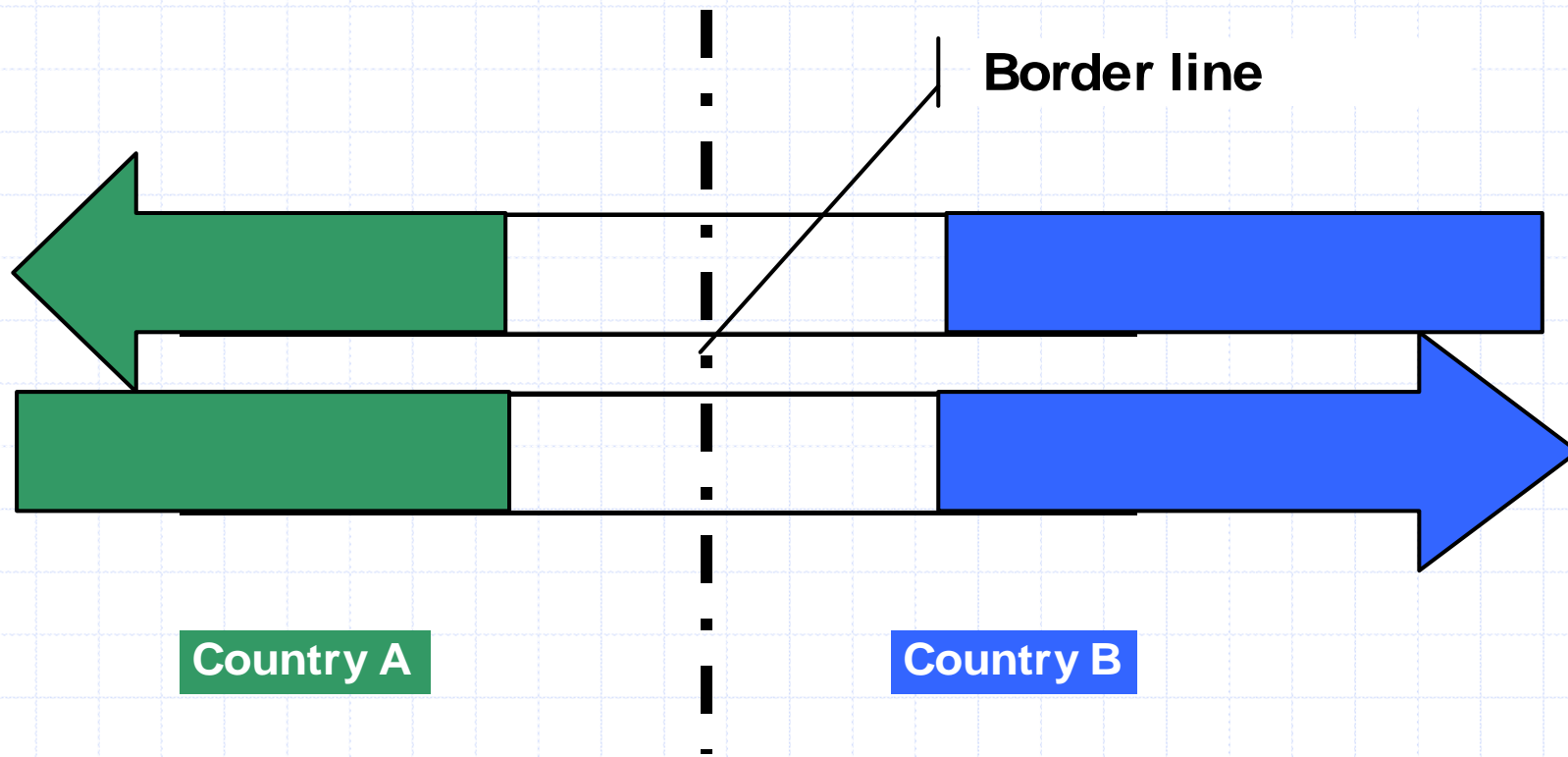
◆ MoU or Treaty?

- Depends on the scope (Canterbury Treaty)
- Who is where (prisoners, cells, accidents)
- Labor law, strikes
- Private sector: Brokers, Banks
- Who patrols the road?
- Who does overall security?

Cross-border cooperative processing

- ◆ Integration usually is not realistic
- ◆ Rather than have a joint examination, agree on the mutual recognition of examination results by the other country if and when feasible

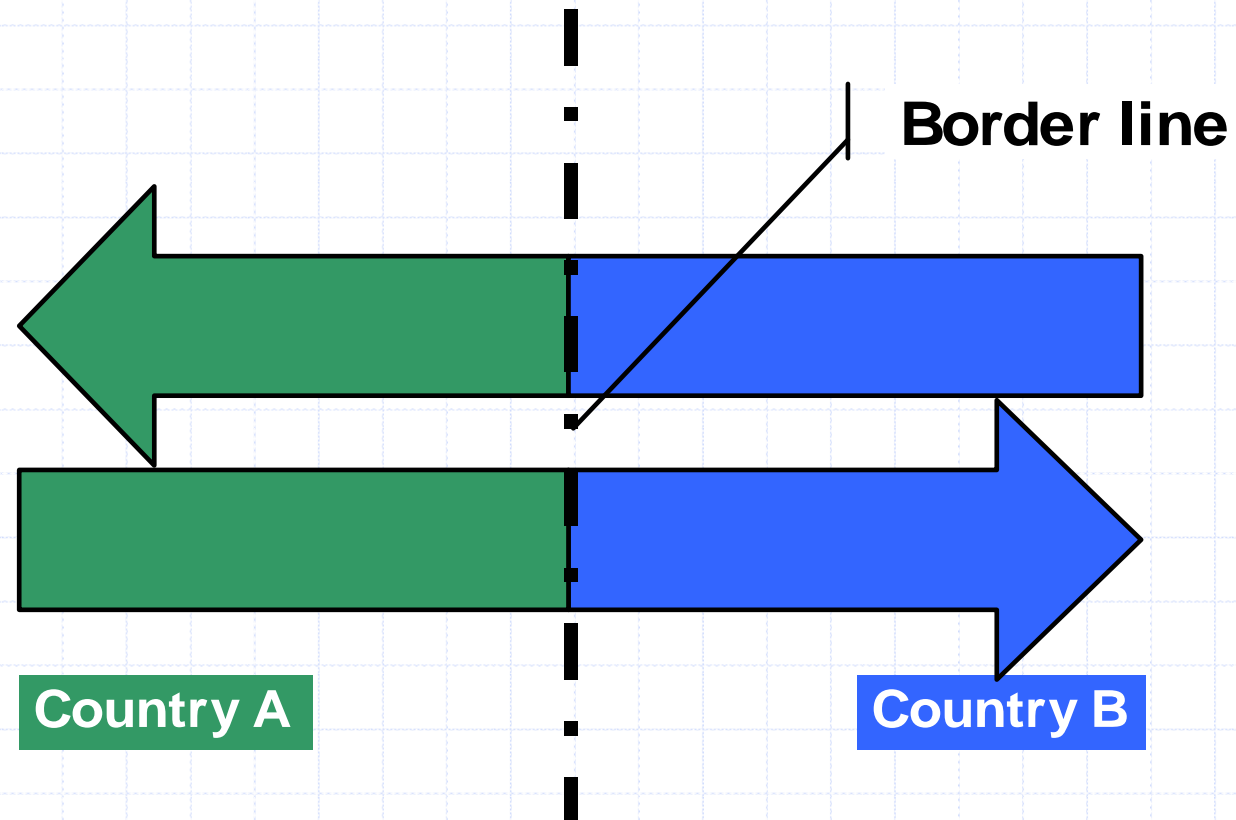
Classical: Not yet a shared facility



Classical

- ◆ Station can be close or far from the border
- ◆ There is no risk of confusion
- ◆ The “no man’s land” can be a buffer zone
- ◆ The interval is a smuggling risk
- ◆ There is limited coordination
- ◆ Processing is doubled

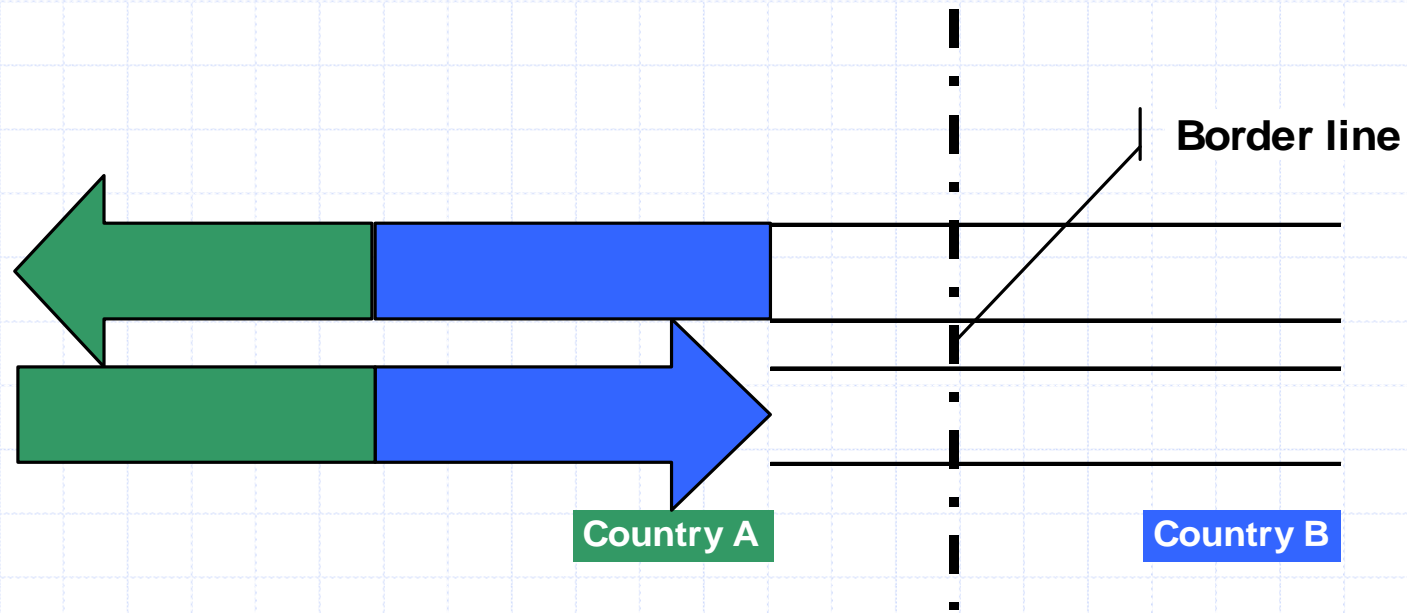
Juxtaposed



Juxtaposed

- ◆ US/Canada model
- ◆ Also works at airports (Canada, Geneva)
- ◆ Good inside a city
- ◆ Can lead to combined operations
- ◆ Easier on flat terrain
- ◆ Requires flow management

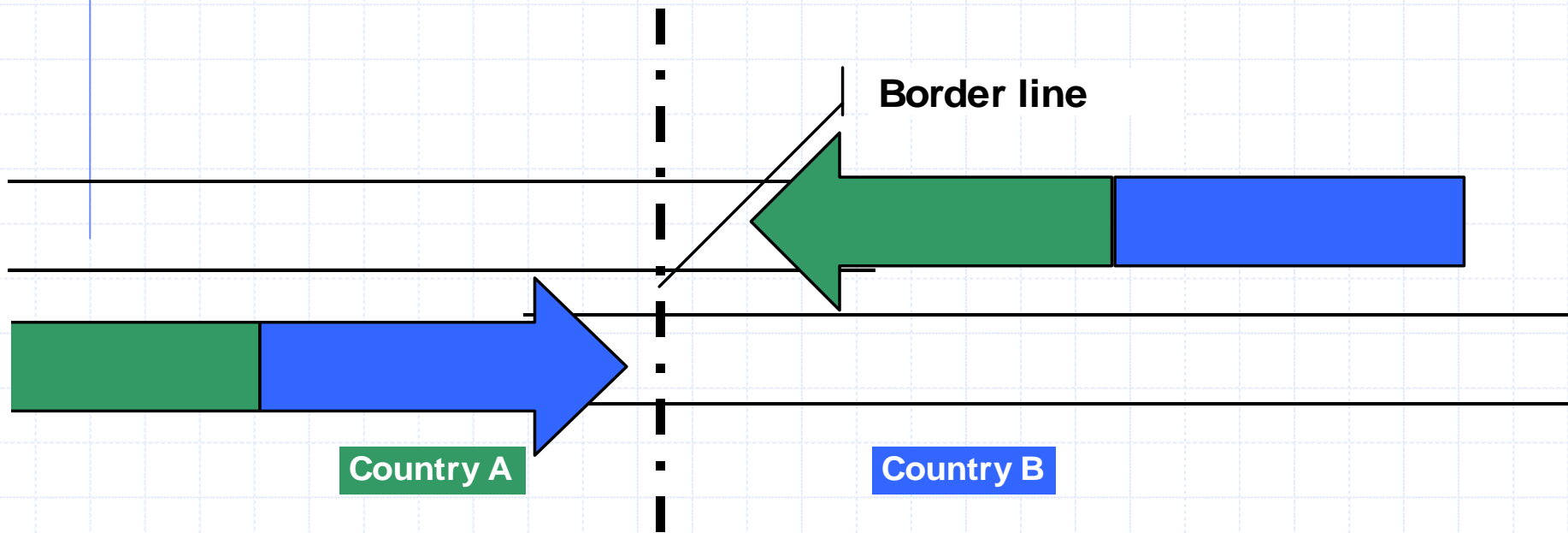
Asymmetric



Asymmetric: The French model

- ◆ Good in mountain areas
- ◆ Promotes integration
- ◆ Cheaper to operate
- ◆ Saves time (in theory)
- ◆ Can turn into an "airport"
- ◆ Serious sovereignty issues
- ◆ Legal issues
- ◆ Cost sharing can be tricky

Staggered



Staggered: The Channel Tunnel

- ◆ Often at the end of a long bridge or tunnel
- ◆ Better for cost sharing
- ◆ Real one-stop-shop
- ◆ Same problems as before
- ◆ Twin infrastructure
- ◆ Different working environment for the same kind of traffic
 - Dogs!

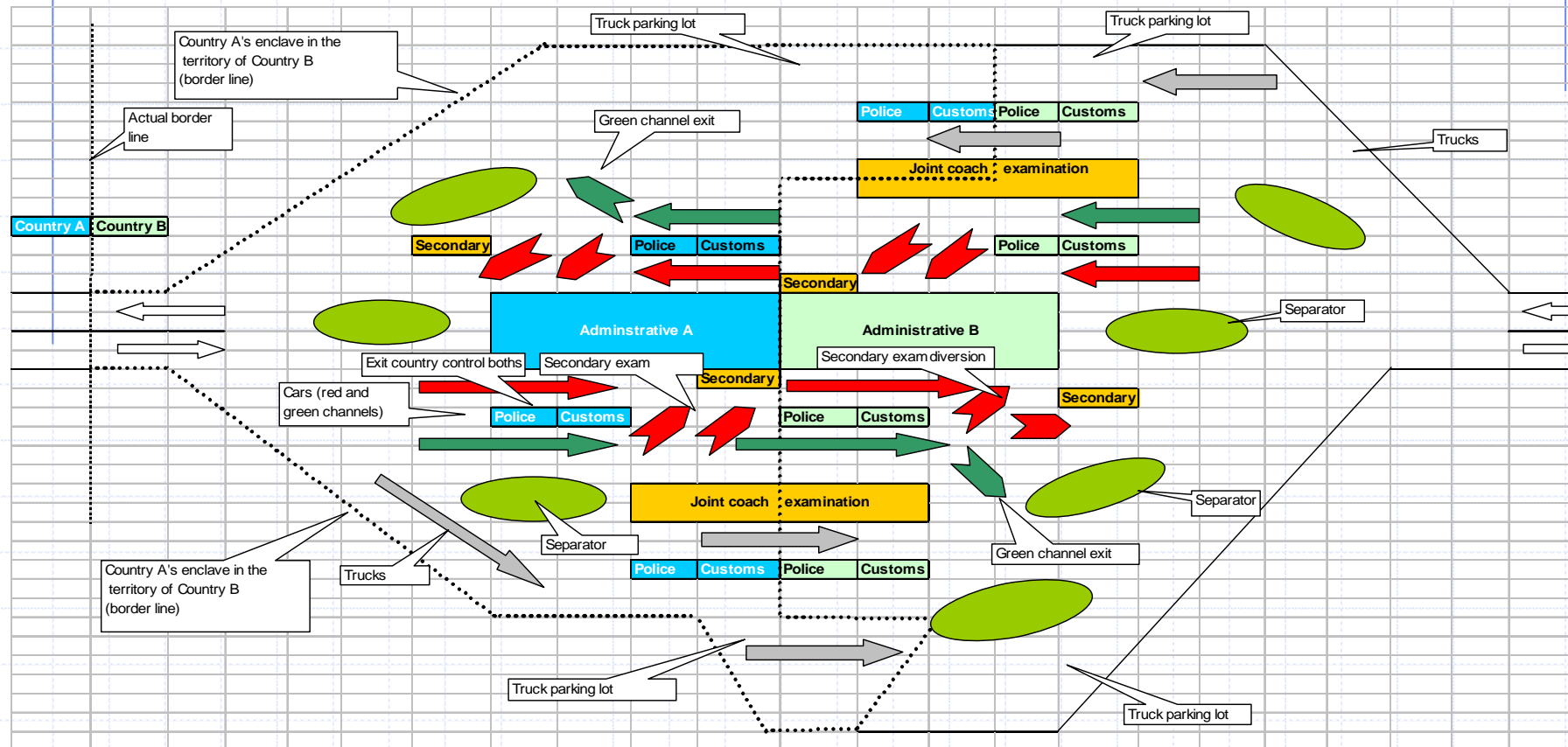
Shared facilities

- ◆ Expedite passenger traffic
- ◆ Economies of scale
- ◆ Shared equipment and infrastructure for truck inspection
- ◆ Shared data and intelligence
- ◆ May delay clearance
- ◆ Legal issues (detection, arrest)
- ◆ Legal status: which is the applicable legislation
- ◆ Road between the facility and the actual border

Options

- ◆ Good for passengers
- ◆ Good for shuttle trade
- ◆ Can be problematic for seamless truck traffic (but not in case of trans-shipment)

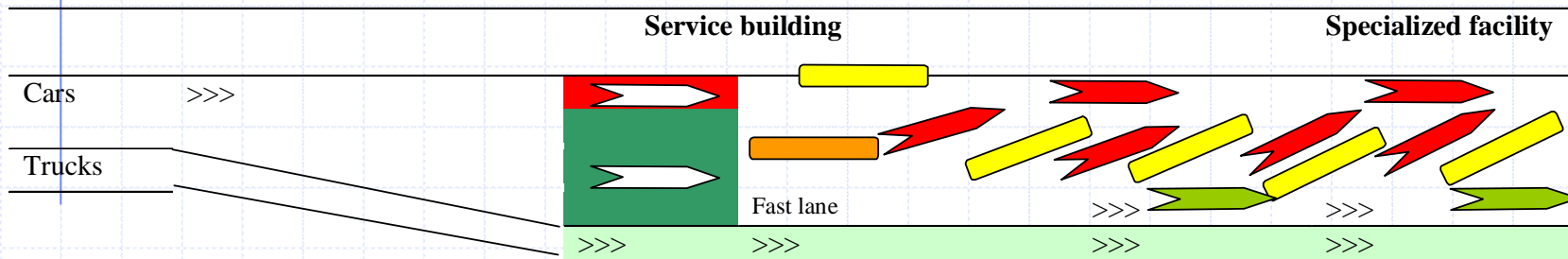
Some infrastructure solutions





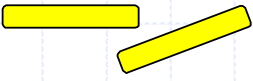
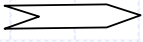


Phased introduction (1)

Diagram – Simplified seamless processing (phase 1)

BORDER SIDE (Entering traffic)

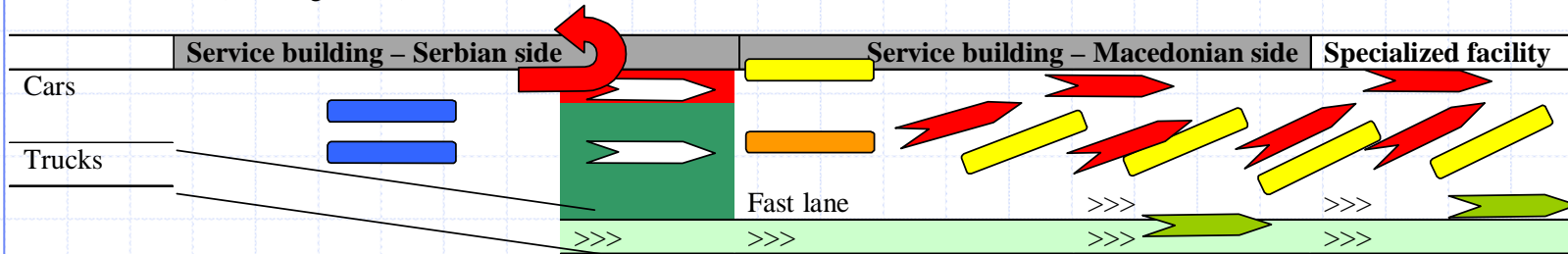





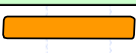
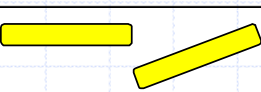



	Lane pre-selection. Red Channel.
	Lane Pre-selection. Green Channel. (The bottom – fast – lane should always remain unblocked.)
	Truck lane. Trucks proceed to their own facility further downstream.
	Targeting booth (Border police and Customs, booth has a glass separation between the two administrations).
	Examination bays. Consist of an examination bench and simplified equipment. More thorough searches are carried out in a specialized facility.
	Circuit of vehicles.

Phased introduction (2)

Diagram 2 – Introduction of a joint facility (phase 3)

BORDER SIDE (Entering traffic)



	Lane pre-selection. Red Channel.
	Lane Pre-selection. Green Channel. (The bottom – fast – lane should always remain unblocked.)
	Truck lane. Trucks proceed to their own facility further downstream.
	Macedonian Targeting booth (Macedonian Border police and Customs, booth has a glass separation between the two administrations).
	Macedonian Examination bays. Consist of an examination bench and simplified equipment. More thorough searches are carried out in a specialized facility.
	Serbian booth (Customs and border police; booth has a glass separation between the two administrations).
	Circuit of vehicles.
	Vehicles denied right of exit or returned to Serbia by Serbian authorities. May apply to cases when an irregularity is detected on exit, so that prosecution can take place on Serbian territory.



The new borders

E. SOME INSTITUTIONAL OPTIONS

Cross-border cooperation and border management

- ◆ Border control: OCR/plate readers
- ◆ Exchange of data
- ◆ Joint intelligence centers
- ◆ Joint border patrols
- ◆ Establish an area along the border where Customs/Police have extended powers of search and arrest

Integrated Border Management

◆ Glitches

- Often the police take the overarching responsibility and they are not the best qualified
- Very diversely interpreted

◆ Often based on a secondary “safety net”

◆ Consolidation of controls

◆ Delegation and cross-designation

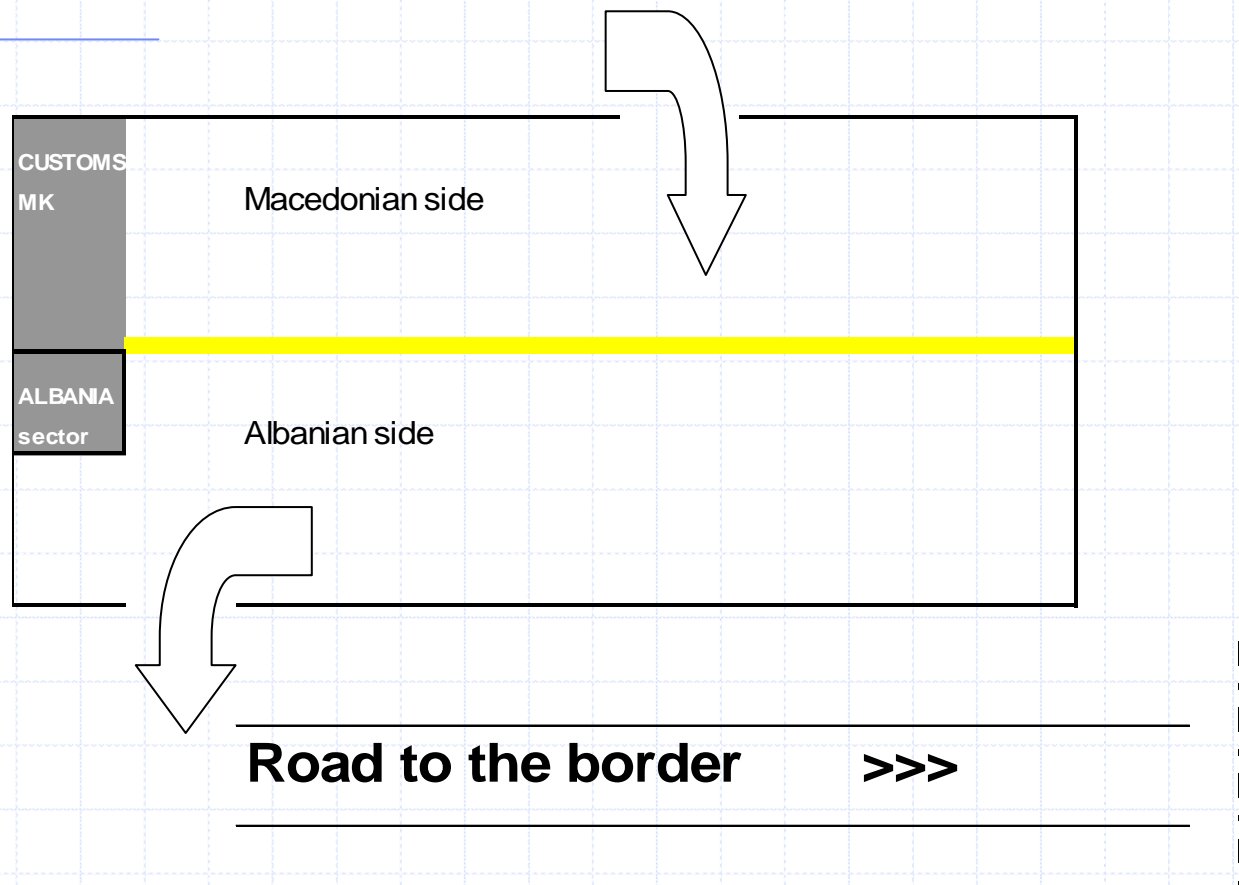
Passenger processing

- ◆ Movement of population through enclaves (Central Asia) – special permit rather than a visa
- ◆ Border markets – abuse
- ◆ Suitcase trade
- ◆ Problem of commercial quantities
- ◆ *It is impossible to collect duties on specific items – a lump sum payment would be better*

EU regional cooperation examples

- ◆ The Schengen agreement
 - Hot pursuit
 - Joint patrols
 - Access to data
- ◆ European arrest warrant
- ◆ Mutual recognition of other country's findings
- ◆ Liability in the country of violation can be prosecuted in home country

Procedures – The “Ohrid” scheme



The effect of infrastructure

- ◆ Set reforms in concrete
- ◆ Provide visibility to modernisation efforts
- ◆ Can be a quick win if adequate policy measures are taken
- ◆ Should NEVER be considered in isolation



The borders aspect

3. HOW WE CAN MAKE SURE OF RESULTS?

How we can make sure of results: The role of performance indicators and benchmarking

Ten Years of Experience

How the need appeared

- ◆ All Western administrations had a time measurement scheme of some sort
- ◆ World Bank projects, among others, needed better monitoring in terms of results, both for infrastructure, technical assistance, and adjustment lending. Cost effectiveness of diminishing resources became essential.
- ◆ Multiple-donor involvement required some coordination



The borders aspect

A. OBJECTIVES AND METHODOLOGIES

The primary objectives

Quantification of results

◆ Targets

- National level, as they turned out to be linked to
- Local border posts

◆ Triggers for disbursement

- Negotiated with client
- Annual review
- Remedial action when off-track

Need for a quick way of collecting indicators

- ◆ Have to be recurrent, therefore easy to collect
- ◆ Need to be accepted both by the administration(s) and the private sector
- ◆ Have to factor ALL border agencies
 - This is not easy, and there can be misunderstandings, mainly when baselines are established
- ◆ Local analysis comes before national release

What exists: Time indicators

- ◆ Time for Release Study (TRS)
 - Resource intensive and slightly disruptive
 - Cannot be recurrent
 - Essentially Customs, ignores queues
- ◆ TTFSE
 - Very resource intensive
 - Combines local and national values
 - Relies on pilot sites and extrapolation
- ◆ Time cost measurement (USAID-UNESCAP)

What exists: Time indicators

◆ Laufzettel

- An EU version of the TRS
- Measures queues

◆ Polish Border Management

- Entirely computerised
- Ignores queues

What exists: Subjective indicators

◆ Logistics Performance Index (LPI)

- Reliable
- Annual (does not show short term evolution)
- Uses TTFSE inputs

◆ WB Doing Business

- Limited in sample
- Annual

National level indicators

	2001	2002	2003	2004	01/02	02/03	03/04	SEE 2002)	IND 03
Total Customs revenue (US\$ Million)	1,993	2,437	2,500	2,930	22.28%	2.59%	17.20%		3,904
Total Customs cost (US\$ Million)	19.06	20.89	39.96	47.97	9.61%	91.29%	20.05%		20
Total Customs staff	7,750	7,900	8,063	8,606	1.94%	2.06%	6.73%		9,957
Total Customs salaries (US\$ Million)	9.90	10.38	14.65	17.22	4.85%	41.14%	17.54%		15
Annual number of declarations	858,700	1,072,940	1,400,000	1,690,260	24.95%	30.48%	20.73%		1,131,121
Import	469,100	588,940	750,000	874,238	25.55%	27.35%	16.57%		565,976
Export	389,600	484,000	650,000	816,022	24.23%	34.30%	25.54%		565,145
Imports (US\$ Million)	16,162	19,733	24,500	31,953	22.10%	24.16%	30.42%		31,638
Exports (US\$ Million)	15,027	16,705	20,000	26,503	11.17%	19.72%	32.52%		145,825
Total (US\$ Million)	31,189	36,438	44,500	58,456	16.83%	22.13%	31.36%		177,462
Revenue collected/Customs staff	257,161	308,481	310,058	340,460	19.96%	0.51%	9.81%	518,520	392,067
Total Customs cost/Revenue collected	0.96%	0.86%	1.60%	1.64%	-10.36%	86.47%	2.43%	2.22%	0.52%
Salaries/Revenue collected	0.50%	0.43%	0.59%	0.59%	-14.25%	37.58%	0.29%	1.51%	0.38%
Trade volume/Staff (USD)	4,024,387	4,612,405	5,519,038	6,792,470	14.61%	19.66%	23.07%	3,397,700	14,645,445
Declarations/Staff	110.80	135.82	173.63	196.40	22.58%	27.84%	13.12%	341.57	114
Economic cost per declaration	22.19	19.47	28.54	28.38	-12.27%	46.60%	-0.57%	30.95	18
Average monthly salary cost	106.45	109.49	151.41	166.74	2.86%	38.28%	10.13%	459.14	124
Average revenue per import declaration	4,248.56	4,137.94	3,333.33	3,351.49	-2.60%	-19.44%	0.54%	1,774.13	6,897
Average value per import declaration	32,033.68	28,364.52	26,666.67	30,315.54	-11.45%	-5.99%	13.68%	11,478.43	313,551
Ratio (effective rate)	13.26%	14.59%	12.50%	11.06%	10.00%	-14.32%	-11.56%	15.77%	2.20%

National level indicators

Total Customs revenue (US\$ Million)
Total Customs cost (US\$ Million)
Total Customs staff
Total Customs salaries (US\$ Million)
Annual number of declarations
Import
Export
Imports (US\$ Million)
Exports (US\$ Million)
Total (US\$ Million)

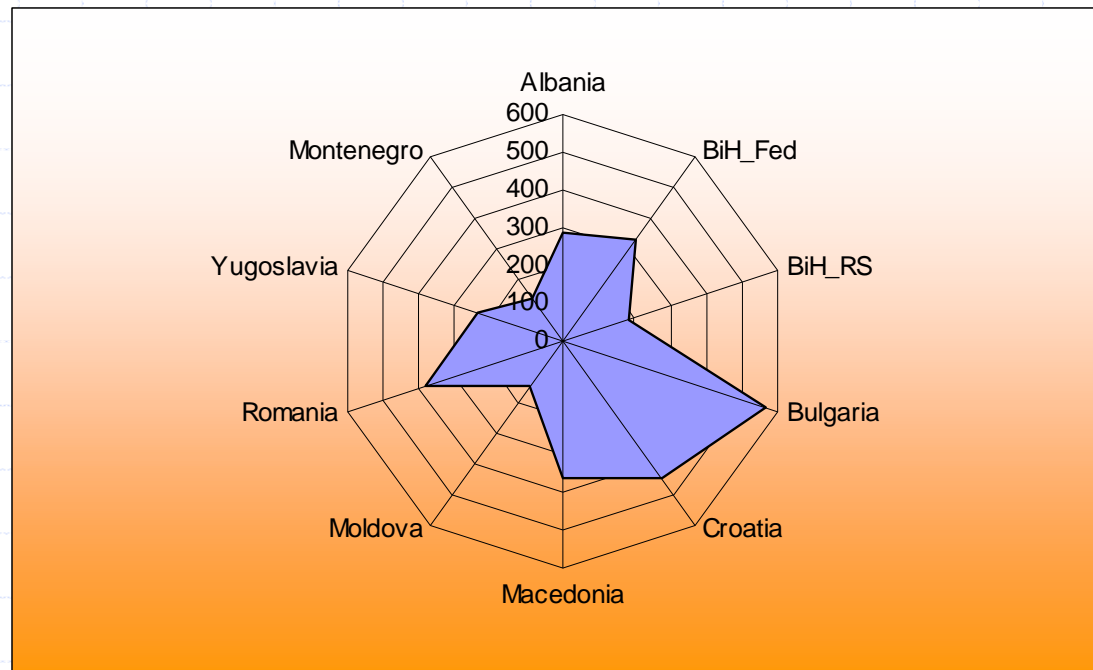
Ratios

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Average monthly salary cost	106.45	109.49	151.41	166.74

Calculations

Average revenue per import declaration	4,248.56	4,137.94	3,333.33	3,351.49
Average value per import declaration	32,033.68	28,364.52	26,666.67	30,315.54
Ratio (effective rate)	13.26%	14.59%	12.50%	11.06%

Regional comparisons



Site performance indicators

- ◆ Time to cross border
- ◆ Time to clear goods
- ◆ Rate of inspection
- ◆ Rate of detection

The TTFSE approach

- ◆ Local
 - Usually linked to infrastructure development
 - But also along corridors
- ◆ National
 - Extrapolation of national level
 - Structural reforms
- ◆ Regional
 - Corridors (came later)
 - Benchmarking
- ◆ Established the notion of quantified triggers for disbursement
- ◆ To this day, the largest and most comprehensive set of data on border crossings.
- ◆ But it is very resource-intensive

TTFSE:

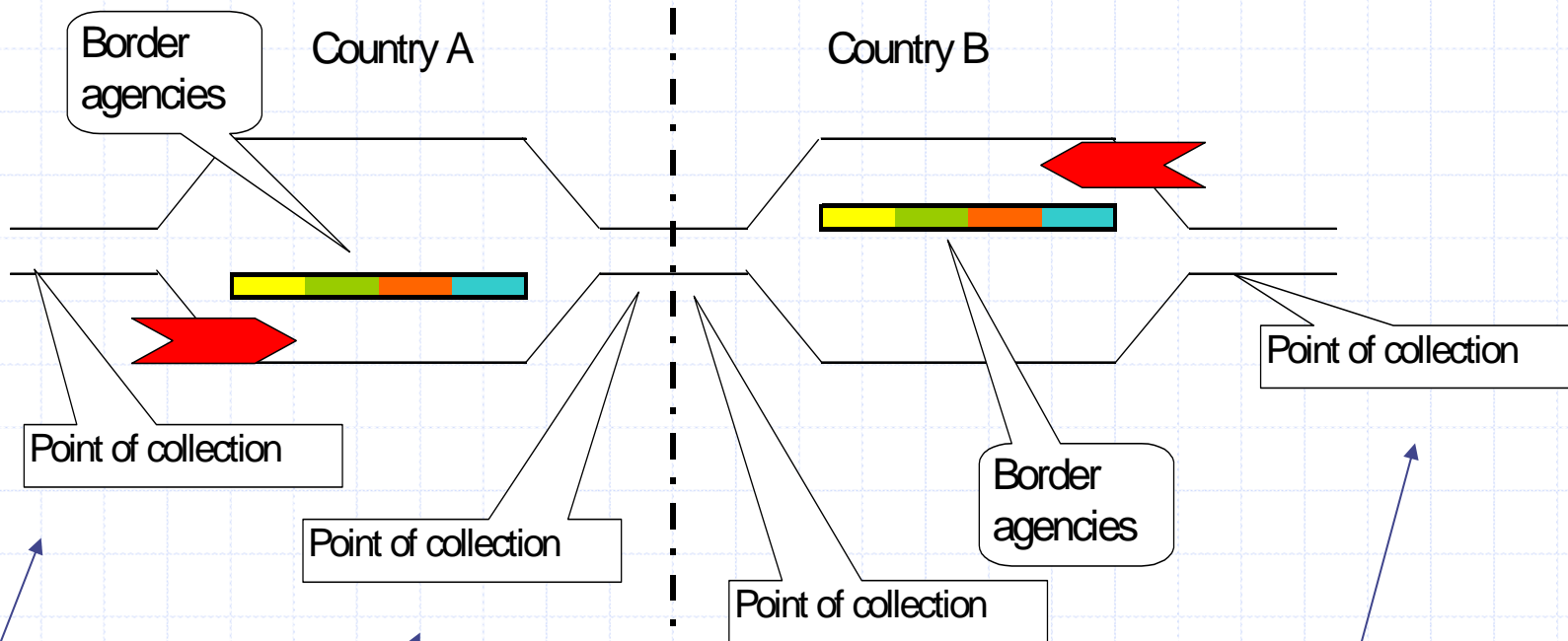
The pilot site approach

- ◆ Worked well in the Balkans
 - Local teams of officials and users
 - External facilitator
 - Need for political support
- ◆ Exists in a slightly different manner in Central Asia

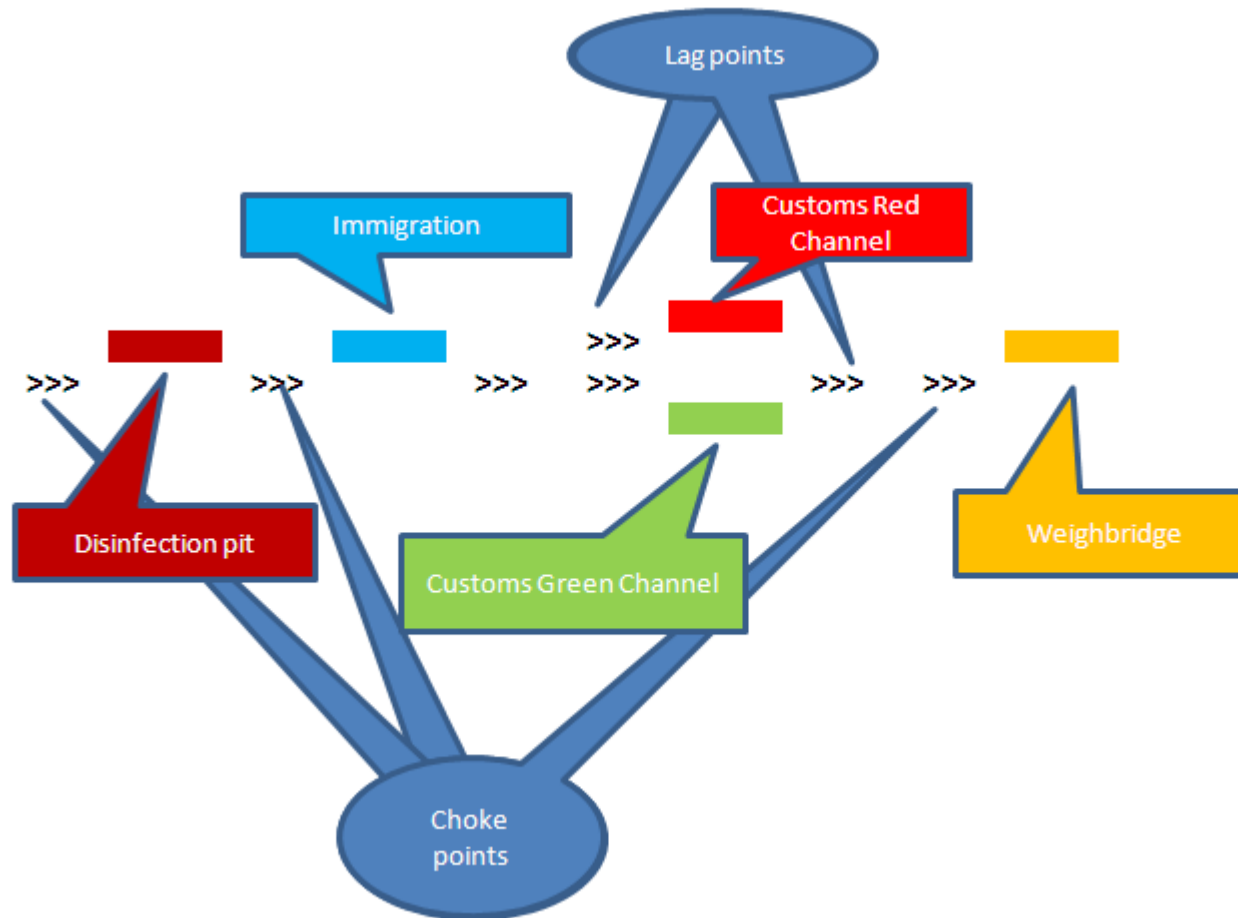
Date and period

- ◆ Initially 3 consecutive days three times over six weeks to validate baseline
- ◆ To identify sample day:
 - Day closest to monthly average
And, if necessary,
 - Peak day
 - Off-peak day

Where is it measured



Choke points



At sea ports

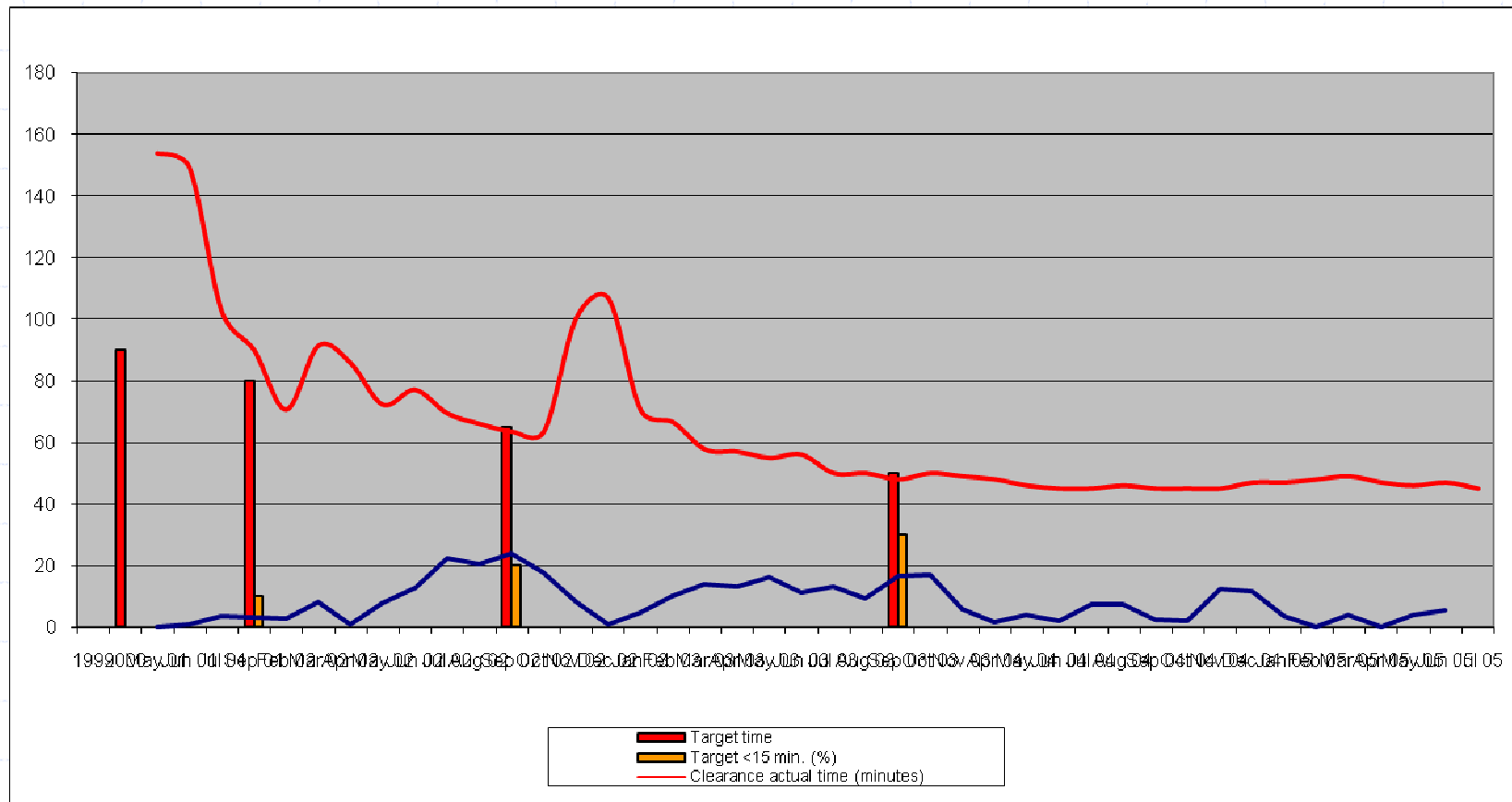
- ◆ All declarations lodged on measurement day
 - Generate spreadsheet
- ◆ Identify manifest on declarations
 - Sort according to manifest
- ◆ Check lodging and ships' arrivals
 - Sort according to date of arrival
- ◆ Identify exit permit
 - Calculate total time (overall and Customs)



The borders aspect

B. FINDINGS

Findings: Targets were usually met



Targets were met...

...When time was the criteria

- Because all agencies worked together
- “What is measured gets managed”
- Increased awareness of extra-administrative issues (queues, dwell time)
- Systems were improved (parking fee structure)

What we found

It was not necessarily Customs that were to blame

Queue effect

One minute on average for ten travelers means:

$1+2+3+4+5+6+7+8+9+10 = 55$ minutes
and an average waiting time of 5:30 minutes

Role of other agencies

Savings

Countries	Beginning	Sep-02	Time saved	
Albania	245	142	103	42.04%
BiH-Fed	153.7	63.5	90.2	58.69%
BiH-RS	324.4	280	44.4	13.69%
Bulgaria	148.3	60	88.3	59.54%
Croatia	293.3	166.8	126.5	43.13%
Macedonia	196.1	177.9	18.2	9.28%
Romania	188.5	94	94.5	50.13%

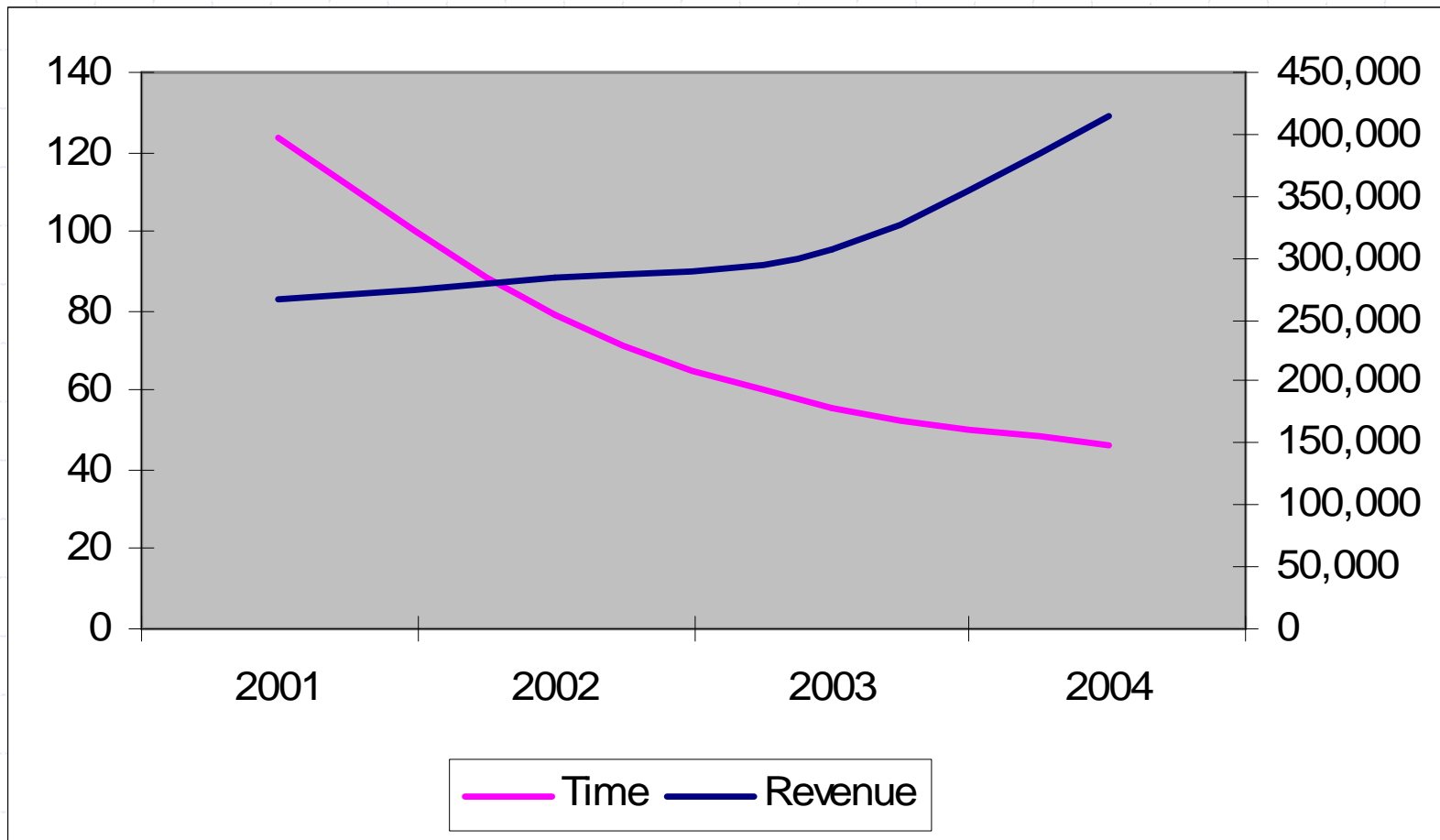
Savings to the economy

- ◆ Each idle truck has a cost of US\$ 15 per hour
- ◆ Multiply total number of trucks by time reduction

RESULT:

In SEE, approximately
US\$m 6.4 in 2003

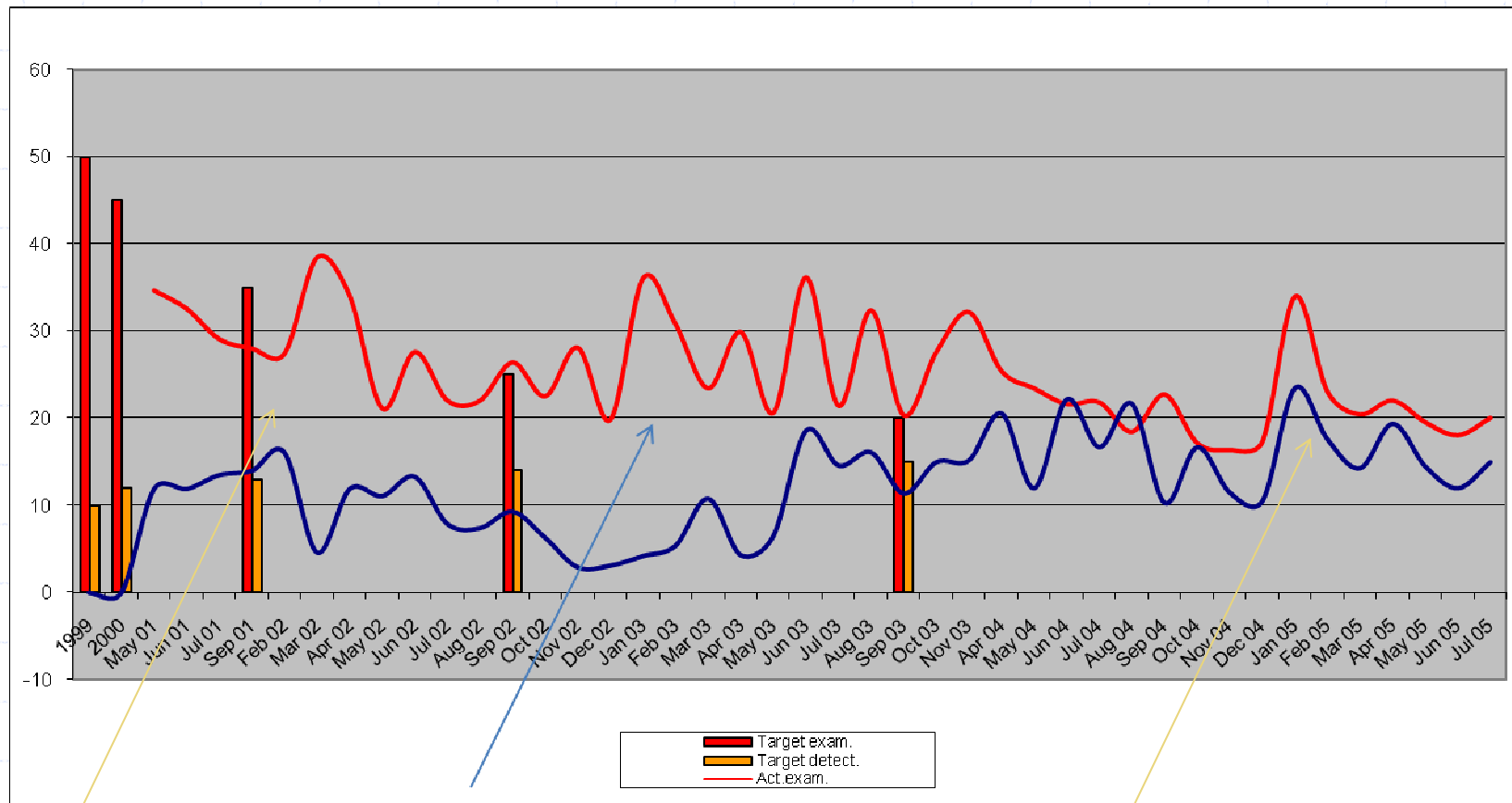
Consistent finding: When times go down, revenue goes up



Affected design and policy options

- ◆ Off-lane secondary checks
- ◆ Need for inter-agency consolidation
- ◆ The trade had a role to play
- ◆ Enforcement was very weak

But examination policies were the problem



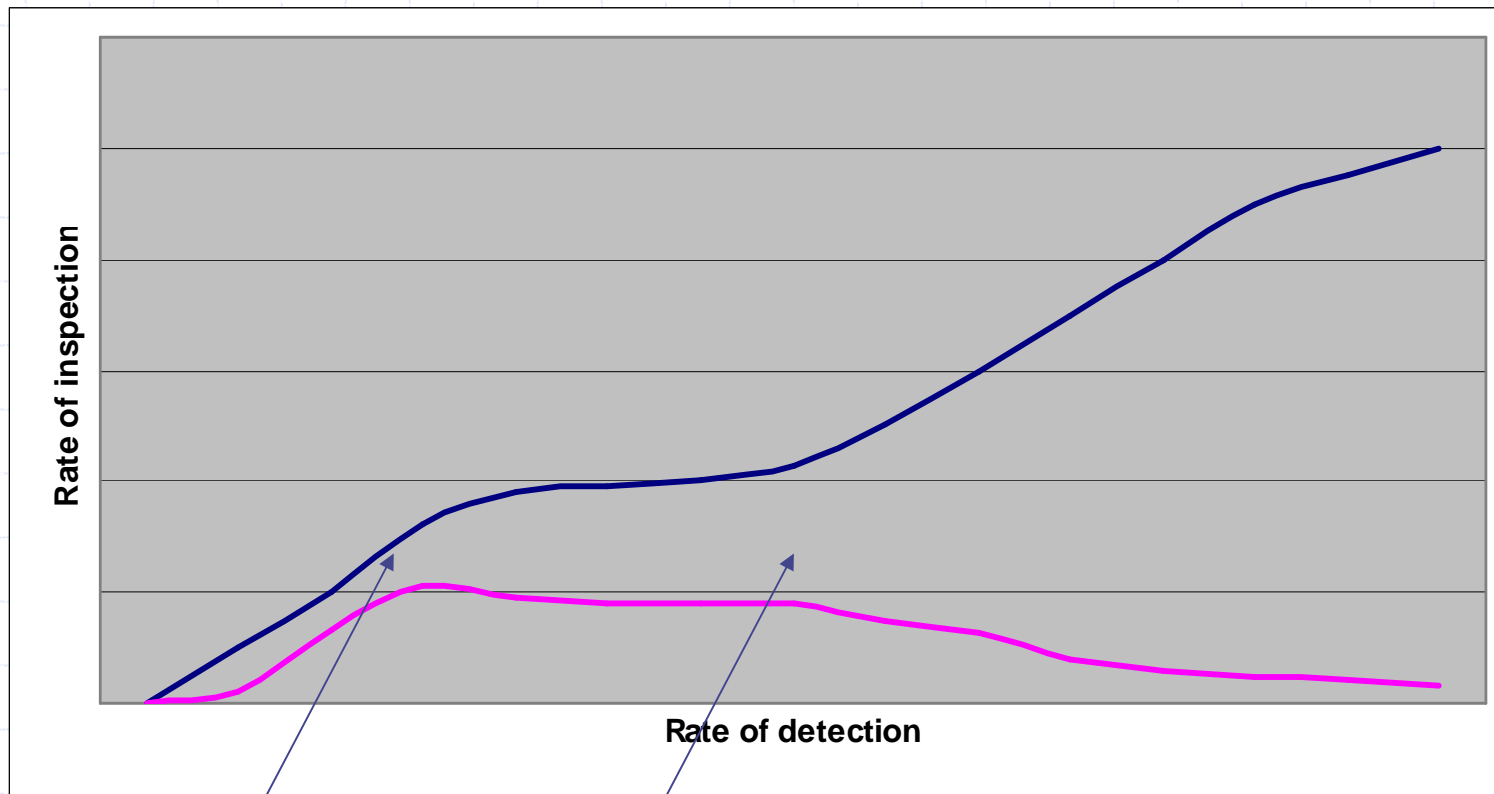
Examination policies

- ◆ Close to 100 percent inspection of some sort
- ◆ Difficult to set levels of detection although there are international standards

BUT

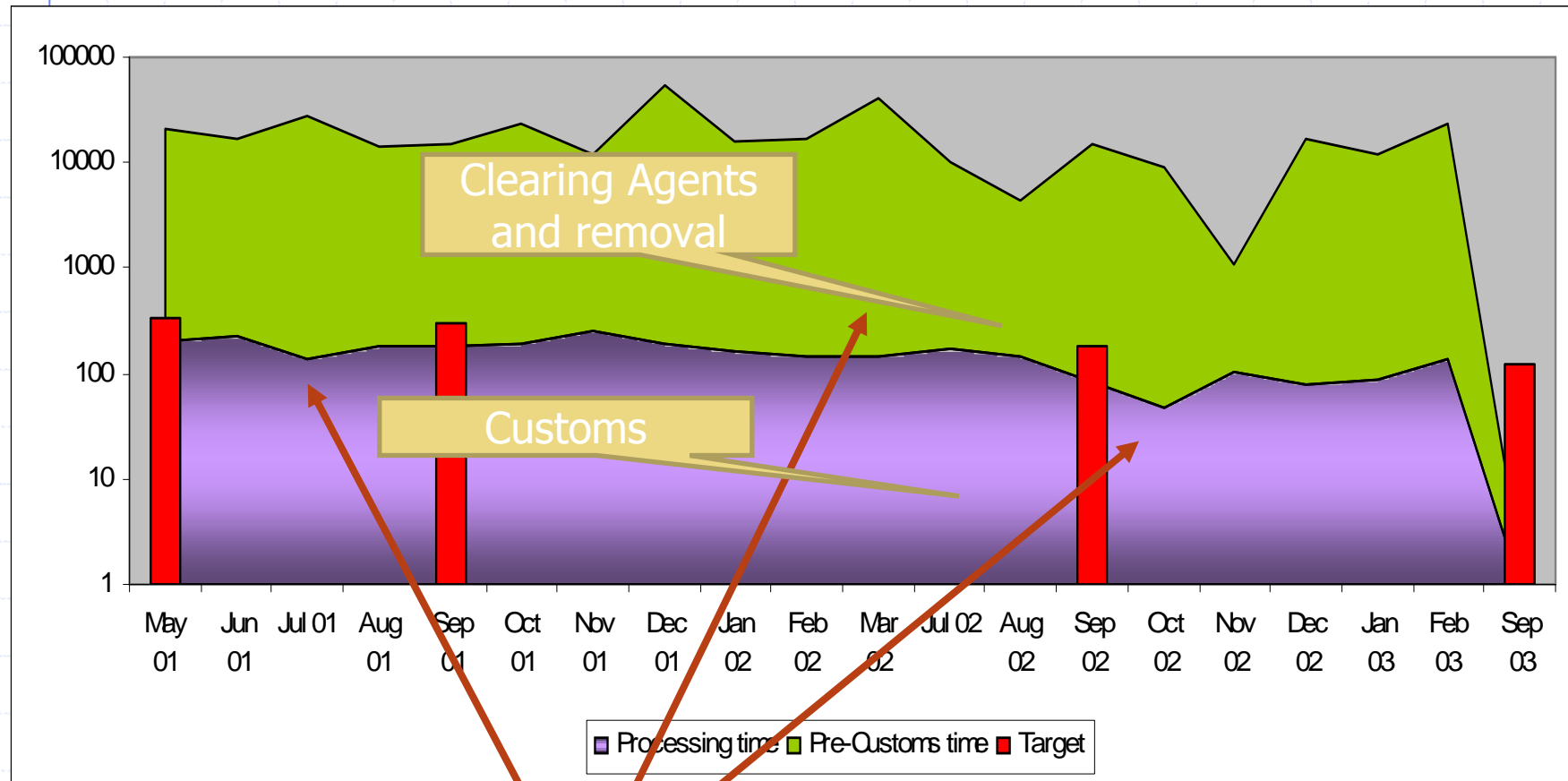
- ◆ Showed uselessness of routine examinations
- ◆ Allowed to calculate the marginal return on a detection
- ◆ Development of compliance models

A possible model



The optimal level of inspection is in the range of 20 to 40 percent

When Customs time goes down, private sector time tends to increase (sea port)



International environment

- ◆ Transition countries mostly – but the methodology was later extended to other countries.
- ◆ Supported by international instruments:
 - Harmonisation Convention implies indicators
 - Some measures (International Weight Certificate) are an indirect consequence of time measurement
 - Kyoto Convention sets benchmarks



The borders aspect

4. THE WAY FORWARD

The way forward?

◆ Extension

- New regions (North Africa, Caucasus, South and South East Asia, Southern Africa, Central Asia, South East Asia)
- Incorporate corridors
- Border markets in Central Asia

◆ Need to institutionalise

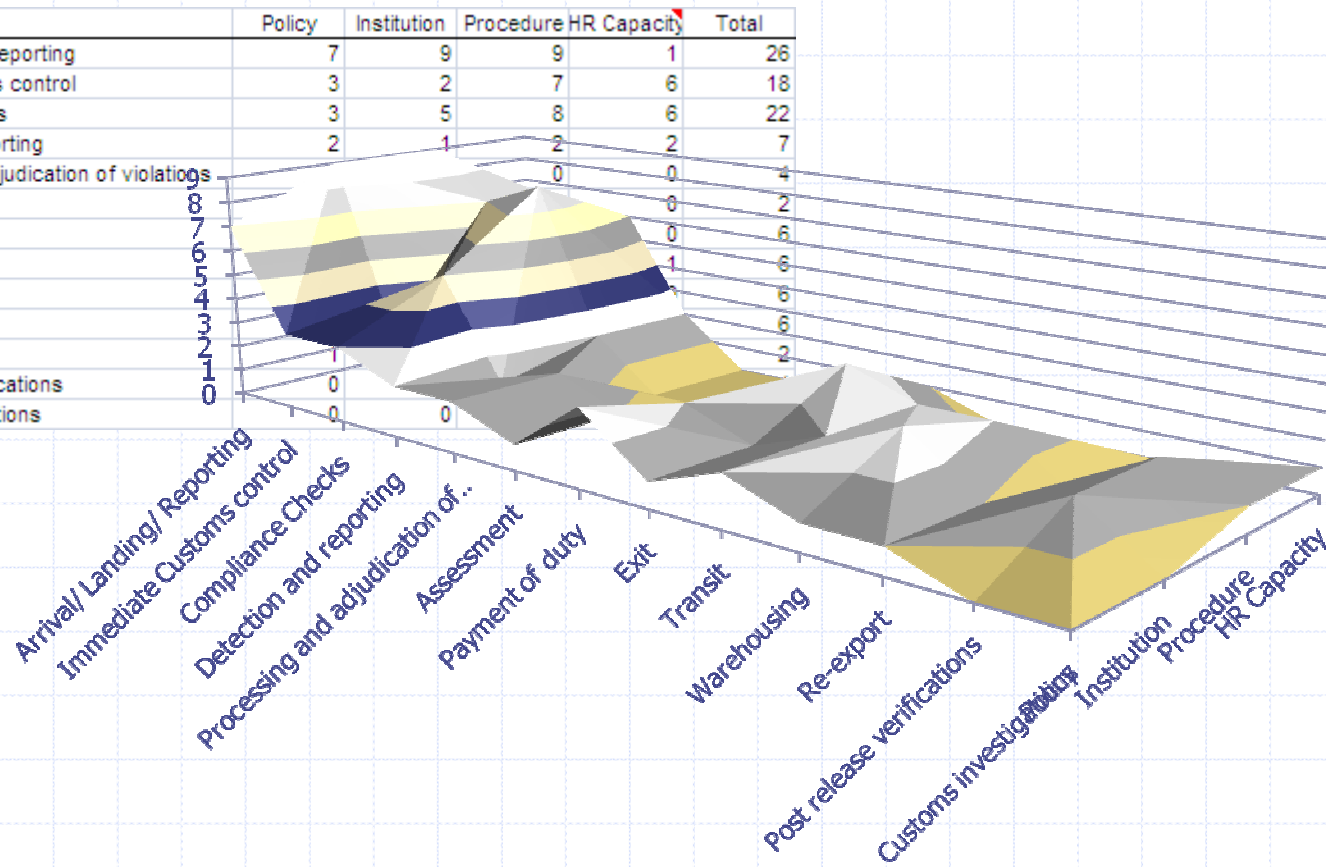
- Built systematically into projects
- International instrument (e.g., Harmonisation Convention)

◆ Reinforce benchmarks

◆ Use for infrastructure design

How it links: The Afghan model

	Policy	Institution	Procedure	HR Capacity	Total
Arrival/ Landing/ Reporting	7	9	9	1	26
Immediate Customs control	3	2	7	6	18
Compliance Checks	3	5	8	6	22
Detection and reporting	2	1	2	2	7
Processing and adjudication of violations			0	0	4
Assessment				0	2
Payment of duty				0	6
Exit				1	6
Transit					6
Warehousing					6
Re-export					2
Post release verifications					0
Customs investigations					0



■ 0-1 ■ 1-2 ■ 2-3 ■ 3-4 ■ 4-5 ■ 5-6 ■ 6-7 ■ 7-8 ■ 8-9

Border crossing index

No sites

2

Traffic				Weighed average	
Site	Avrg time	N v	%	Local	National
A	2	8000	97.56%	1.95	
B	2	200	2.44%	0.05	
				1.00	

Vehicle/Staff (Productivity index)						
	Staff	Vehicles	%	Ratio	Correction	Local index
A	22	8000	97.56%	363.64	0.00	0.00
B	4	200	2.44%	50.00	0.02	0.00
						0.00

Detection/Inspection (Efficiency index)				
	Detection	% traffic	Staff	Local index
A	1	0.01%	0.0455	0.0001
B	12	6.00%	3.00	0.06
				0.130125

Aggregate
Time/Work
0.02
+Enforcement
0.12

Design tool

Queue length depending on Number of lanes								
v1			v2			v3		
1	2	3	1	2	3	1	2	3
120	60	40	240	120	80	360	180	120

Institutionalise

- ◆ Ensure consistency
- ◆ Internalise the facilitation approach
- ◆ ISO-like classification

The Harmonisation Convention of 1982

- ◆ Customs are the lead agency for the examination of goods
- ◆ There should be no repeat examination
- ◆ All inspections should be coordinated

Do not scrap borders, they can still be useful

